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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Norihiko Fuchigami

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THE NATH LAW GROUP
112 South West Street
Alexandria, VA 22314

EXAMINER

DAZENSKI, MARC A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,766	Applicant(s) FUCHIGAMI ET AL.	
	Examiner MARC DAZENSKI	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10-3-05, 9-26-08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter as follows. Claim 28 defines a program embodying functional descriptive material. However, the claim does not define a computer-readable medium or computer-readable memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium

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and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. The examiner suggests amending the claim so that the program is embodied on a non-transitory computer readable medium.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al (US Patent 6,263,150), hereinafter referred to as Okada, in view of Tsutsui et al (US Patent 5,752,224), hereinafter referred to as Tsutsui.

Regarding **claim 1**, Okada discloses a video data editing apparatus, optical disc for use as a recording medium of a video data editing apparatus, and computer-readable recording medium storing an editing program. Further, Okada discloses an audio/video recording apparatus for, at the time of recording a set of synchronized video data and audio data as a video object onto a recording medium (21), recording a reproduction sequence for connecting and reproducing a plurality of video objects in part or in whole onto the recording medium (21) so that the reproduction sequence can

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be designated (see column 35, lines 33-40 as well as figures 16-17 and their accompanying text), comprising:

video data changing means (27, 24, 23) that changes the video data as necessary so that a video frame to be reproduced last in a video object and a video frame to be reproduced first in the following video object are reproduced seamlessly at a connection point (see column 45, lines 25-52 and figures 28A-B);

edition point determining means (26) that determines an edition point of the audio frame so that a period of reproducing an audio frame to be reproduced last in the video object includes time of the connection point of the video frames and a period of reproducing an audio frame to be reproduced first in the following video object includes the time of the connection point (see column 40, lines 18-40; column 41, lines 11-30; and column 42, lines 49-58; as well as figures 23A-25 and their corresponding text); and

recording means (23) that records the edition point as registration information onto the recording medium (21) (see column 42, lines 59-61, "seamless linking information written onto the DVD-RAM").

However, Okada fails to disclose audio encoding means (24 (11, 12, 13)) that performs encoding including a window function multiplying process and an orthogonal transformation process on an audio signal to be recorded and outputs the audio data. The examiner maintains it was well known to include the missing limitations, as taught by Tsutsui.

In a similar field of endeavor, Tsutsui discloses an information encoding method and apparatus, information decoding method and apparatus information transmission

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method and information recording medium. Further, Tsutsui discloses audio encoding means (24 (11, 12, 13)) that performs encoding including a window function multiplying process and an orthogonal transformation process on an audio signal to be recorded and outputs the audio data (see column 5, line 21 through column 6, line 4 with particular emphasis on column 5, lines 28-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Okada to include the teachings of Tsutsui for the purposes of suppressing quantization noise in an encoded audio signal.

Regarding **claim 2**, the examiner maintains the claim is the corresponding method to the apparatus of claim 1 and is therefore rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 3**, the combination of Okada and Tsutsui discloses everything claimed as applied above (see claim 1). Further, Okada discloses overlap time calculating means (38) for calculating time of overlap between an audio frame to be reproduced last in a video object and an audio frame to be reproduced first in the following video object so as to include the edition point obtained from the reproduction management information (see steps S112 – S116 in figures 21-22);

offset time calculating means (39) that sets the calculated overlap time as audio PTS offset time to be used at the time of reproducing an audio frame of the following video object when the edition point is the first connection point in a designated reproduction sequence (see column 40, lines 41-55 as well as figure 24B) , calculates a

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value obtained by adding the calculated overlap time and audio PTS offset time at the immediately preceding connection point as audio PTS offset time at the present edition point when the edition point is any of the second and subsequent connection points in the reproduction sequence (see column 40, line 56 through column 41, line 11 as well as figure 24C), and outputs an audio drop flag of a predetermined value indicating that it is unnecessary to reproduce an audio frame to be reproduced last in the video object at the time of connection under a predetermined condition (see column 41, lines 31-38 “silent audio frame data”);

resetting means (37) that resets a system time clock (STC) of the apparatus so as to seamlessly connect video frames to be connected at each of connection points of the video objects included in the reproduction sequence (see column 43, lines 1-27);

offset means (37, 35) that offsets PTS of an audio frame read from the recording medium (31) in accordance with the calculated audio PTS offset time (see column 43, lines 43-61);

video data reproducing means (34) that reproduces video data reproduced from the recording medium (31) in accordance with video PTS accompanying the video data (see column 35, line 57 through column 36, line 9); and,

audio frame reproducing means (35) that reproduces an audio frame reproduced from the recording medium (31) in accordance with the offset PTS and, when the audio drop flag shows the predetermined value, controls so as not to reproduce an audio frame to be reproduced last in the video object (see column 41, lines 31-38).

Further, Tsutsui discloses audio decoding means (35 (15, 16, 17)) that performs decoding including a window function multiplying process and an orthogonal inverse transformation process on the audio frame reproduced by the audio frame reproducing means and outputs an audio signal (see column 5, line 21 through column 6, line 4 with particular emphasis on column 5, lines 28-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Okada to include the teachings of Tsutsui for the purposes of suppressing quantization noise in an encoded audio signal.

Regarding **claim 4**, the examiner maintains the claim is the corresponding method to the apparatus of claim 3 and is therefore rejected in view of the explanation set forth in claim 3 above.

Regarding **claim 5**, the combination of Okada and Tsutsui discloses everything claimed as applied above (see claim 2). Further, Okada discloses the embodiment may be represented by software (see column 44, lines 49-59); because the claim is merely the program enacting the method of claim 4, the limitations of the claim are rejected in view of the explanation set forth in claim 4 above.

Regarding **claim 6**, the combination of Okada and Tsutsui discloses a video data editing apparatus, optical disc for use as a recording medium of a video data editing apparatus, and computer-readable recording medium storing an editing program. Further, Okada discloses an audio/video recording apparatus for, at the time of recording a set of synchronized video data and audio data as a video object onto a

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recording medium (21), recording a reproduction sequence for connecting and reproducing a plurality of video objects in part or in whole onto the recording medium so that the reproduction sequence can be designated (see column 35, lines 33-40 as well as figures 16-17 and their corresponding text), comprising:

multiplexing means (24) that multiplexes the audio data and the video data to generate the video object (see column 42, lines 44-48);

control means (24, 26) that controls the multiplexing means (24) so that an audio buffer occupation amount is equal to or less than a value obtained by subtracting a data amount of one audio frame from the upper limit of a specific audio buffer size, and generates a flag indicative of an audio multiplex state at the time of multiplexing by the multiplexing means (24) (see column 48, lines 41-56; column 49, lines 54-61; as well as figure 34 and its accompanying text); and

recording means (23) that records the video object 5 output from the multiplexing means (24) controlled by the control means (24, 26) onto the recording medium (21) together with a flag indicative of the audio multiplex state generated by the control means (24, 26) (see column 50, lines 52-57).

Further, Tsutsui discloses audio encoding means (24 (ii, 12, 13)) that performs encoding including a window function multiplying process and an orthogonal transformation process on an audio signal to be recorded and outputs the audio data (see column 5, line 21 through column 6, line 4 with particular emphasis on column 5, lines 28-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Okada to include the teachings of Tsutsui for the purposes of suppressing quantization noise in an encoded audio signal.

Regarding **claim 7**, the limitations of the claim are rejected in view of the explanation set forth in regards to claims 1 and 6 above.

Regarding **claim 8**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 6 and is therefore rejected in view of the explanation set forth in claim 6 above.

Regarding **claim 9**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 7 and is therefore rejected in view of the explanation set forth in claim 7 above.

Regarding **claim 10**, the limitations of the claim are rejected in view of the explanation set forth in claim 3 above.

Regarding **claim 11**, the combination of Okada and Tsutsui discloses everything claimed as applied above (see claim 3 or 10). Further, Okada discloses wherein when the audio PTS offset time at the calculated connection point is longer than a period of "n" times (where n is 1 or 1/2) of audio frame time, the offset time calculating means (39) calculates a value obtained by subtracting the audio frame period from the audio PTS offset time as final audio PTS offset time, and outputs an audio drop flag of a predetermined value indicating that it is unnecessary to reproduce an audio frame to be

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reproduced last in the video object at the time of connection (see column 31, lines 45-62 and column 32, lines 36-65; column 33, lines 1-5).

Regarding **claim 12**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 10 and is therefore rejected in view of the explanation set forth in claim 10 above.

Regarding **claim 13**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 11 and is therefore rejected in view of the explanation set forth in claim 11 above.

Regarding **claim 14**, the combination of Okada and Tsutsui discloses everything claimed as applied above (see claim 9). Further, Okada discloses the embodiment may be represented by software (see column 44, lines 49-59); because the claim is merely the program enacting the method of claim 9, the limitations of the claim are rejected in view of the explanation set forth in claim 9 above.

Regarding **claim 15**, the limitations of the claim are rejected in view of the explanation set forth in claims 1 and 3 above.

Regarding **claim 16**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 15 and is therefore rejected in view of the explanation set forth in claim 15 above.

Regarding **claim 17**, the combination of Okada and Tsutsui discloses everything claimed as applied above (see claim 15). Further, Okada discloses overlap time reproducing means (52) that reproduces the overlap time from the recording medium

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(51) (see column 35, line 57 through column 36, line 9); and, further, the remaining limitations are rejected in view of the explanation set forth in view of claim 3 above.

Regarding **claim 18**, the limitations of the claim are rejected in view of the explanation set forth in claim 11 above.

Regarding **claim 19**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 17 and is therefore rejected in view of the explanation set forth in claim 17 above.

Regarding **claim 20**, the examiner maintains that the claim is the corresponding method to the apparatus of claim 18 and is therefore rejected in view of the explanation set forth in claim 18 above.

Regarding **claim 21**, the combination of Okada and Tsutsui discloses everything claimed as applied above (see claim 16). Further, Okada discloses the embodiment may be represented by software (see column 44, lines 49-59); because the claim is merely the program enacting the method of claim 19, the limitations of the claim are rejected in view of the explanation set forth in claim 19 above.

Regarding **claim 22**, the limitations of the claim are rejected in view of the explanation set forth in claims 1, 3, and 15 above.

Regarding **claim 23**, the limitations of the claim are rejected in view of the explanation set forth in claim 18 above.

Regarding **claims 24-25**, the examiner maintains the claims are merely the corresponding method claims to the apparatus claims of 22-23, respectively, and are therefore rejected in view of the explanation set forth in 22-23 above.

Regarding **claim 26**, the limitations of the claim are rejected in view of the explanation set forth in claim 17 above.

Regarding **claim 27**, the examiner maintains the claim is merely the corresponding method to the apparatus of claim 26 and is therefore rejected in view of the explanation set forth in claim 26 above.

Regarding **claim 28**, the examiner maintains that the claim is merely the corresponding program for the method of claim 24 and is therefore rejected in view of the explanation set forth in claim 24 above.

Regarding **claim 29**, the examiner maintains that the claim is merely the corresponding program for the method of claim 27 and is therefore rejected in view of the explanation set forth in claim 27 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571)270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/MARC DAZENSKI/
Examiner, Art Unit 2621